Sexually Transmitted Diseases

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Introduction

- Diseases Covered
  - Genital Ulcer Disease
    - HSV, syphilis
  - HPV
  - Urethritis/Cervicitis
    - GC, Chlamydia, NGU, MPC
  - Vaginal Discharge
    - BV, trichomonas
- Not Covered
  - HIV, Chancroid, LGV
- Future Trends

Useful Resources

CDC: Center for Disease Control

Sexually Transmitted Diseases Treatment Guidelines, 2002

http://www.cdc.gov/std/treatment/TOC2002TG.htm

AHRQ / US Preventive Services Task Force:

http://www.ahrq.gov/clinic/uspstf/uspstopics.htm

Genital Ulcer Diseases

- Differential includes:
  - HSV-1 vs HSV-2 : most common in US
  - Primary Syphilis
  - Things You Won't See On Boards:
    - Chancroid
    - LGV-- lymphogranuloma venereum
    - Granuloma Inguinale
    - See handout or CDC if esoterica is your thing

Herpes Simplex Virus

- Recurrent, incurable viral disease
- HSV-1 and HSV-2: Over 50 million affected patients in US; ~1 million new cases/year
- Most HSV-2 infections undiagnosed
- Most transmission from undiagnosed or asymptomatic pts

- KEY: Diagnose by clinical suspicion and **type-specific testing** (e.g. culture or DFA)- not Tzank

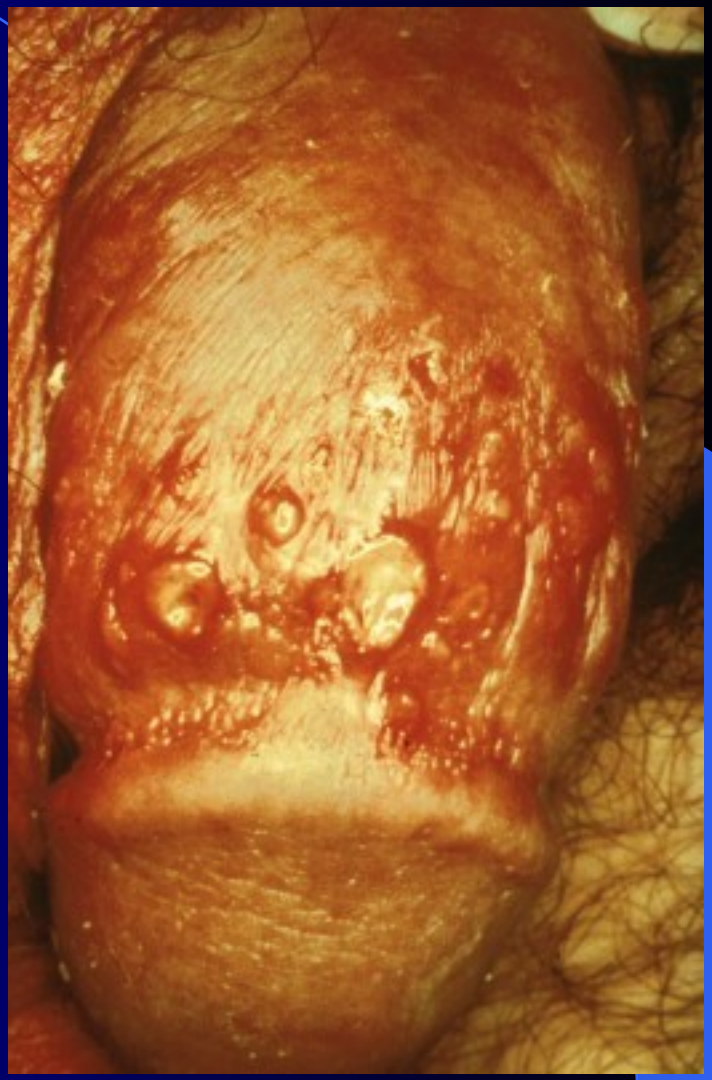
HSV, Primary Infection

- 5-30% due to HSV1
- HSV-2 mostly anogenital
- Patient Education:

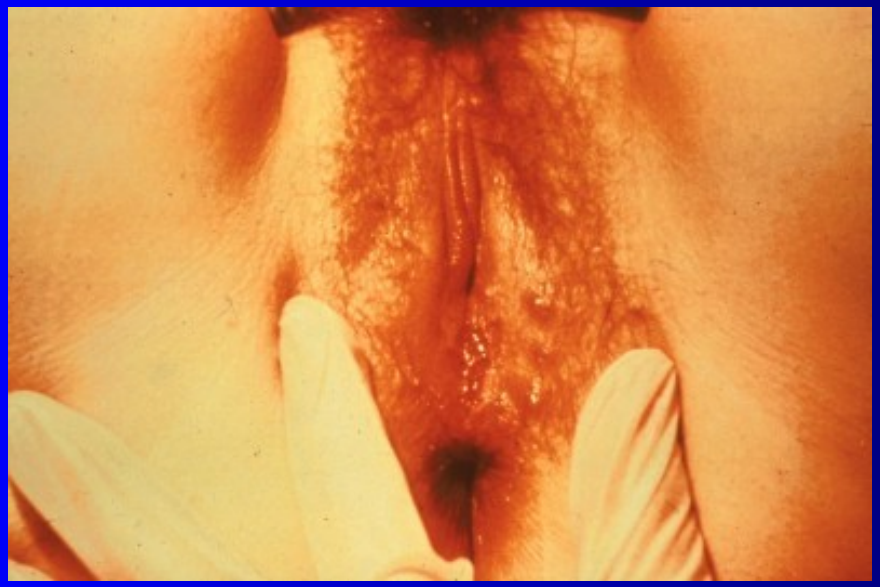
a. Natural history of disease

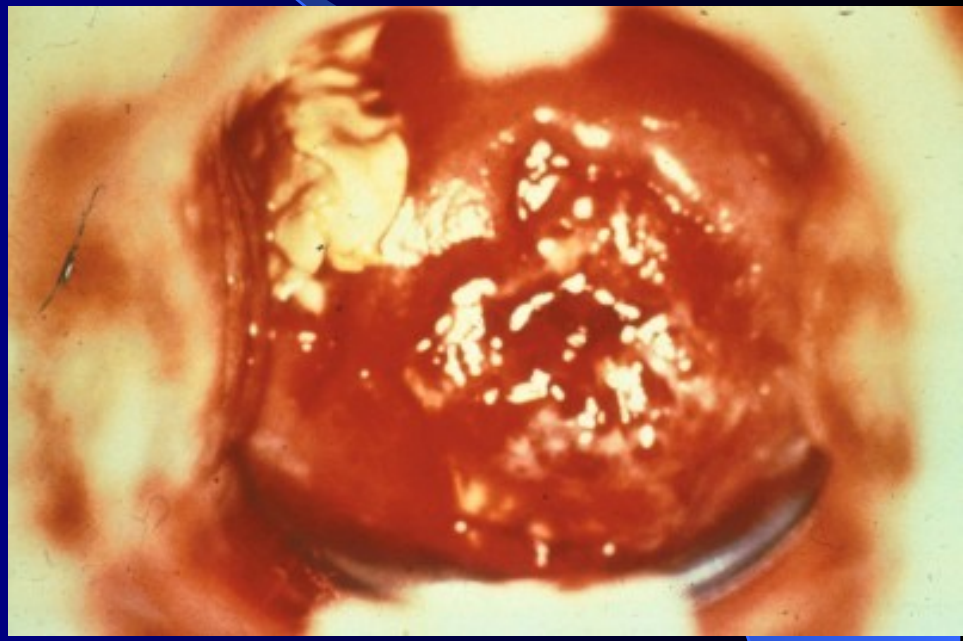
b. Sexual & perinatal transmission

c. Methods to reduce risk of transmission



Primary HSV, female patient





Primary infection in pregnancy:
highest risk of fetal transmission

Medical Treatment
First Clinical Episode

Recommended Regimens

Acyclovir 400 mg po tid x 7-10 days,

OR

Acyclovir 200 mg po 5x/day for 7-10 days,

OR

Famciclovir 250 mg po tid x 7-10 days,

OR

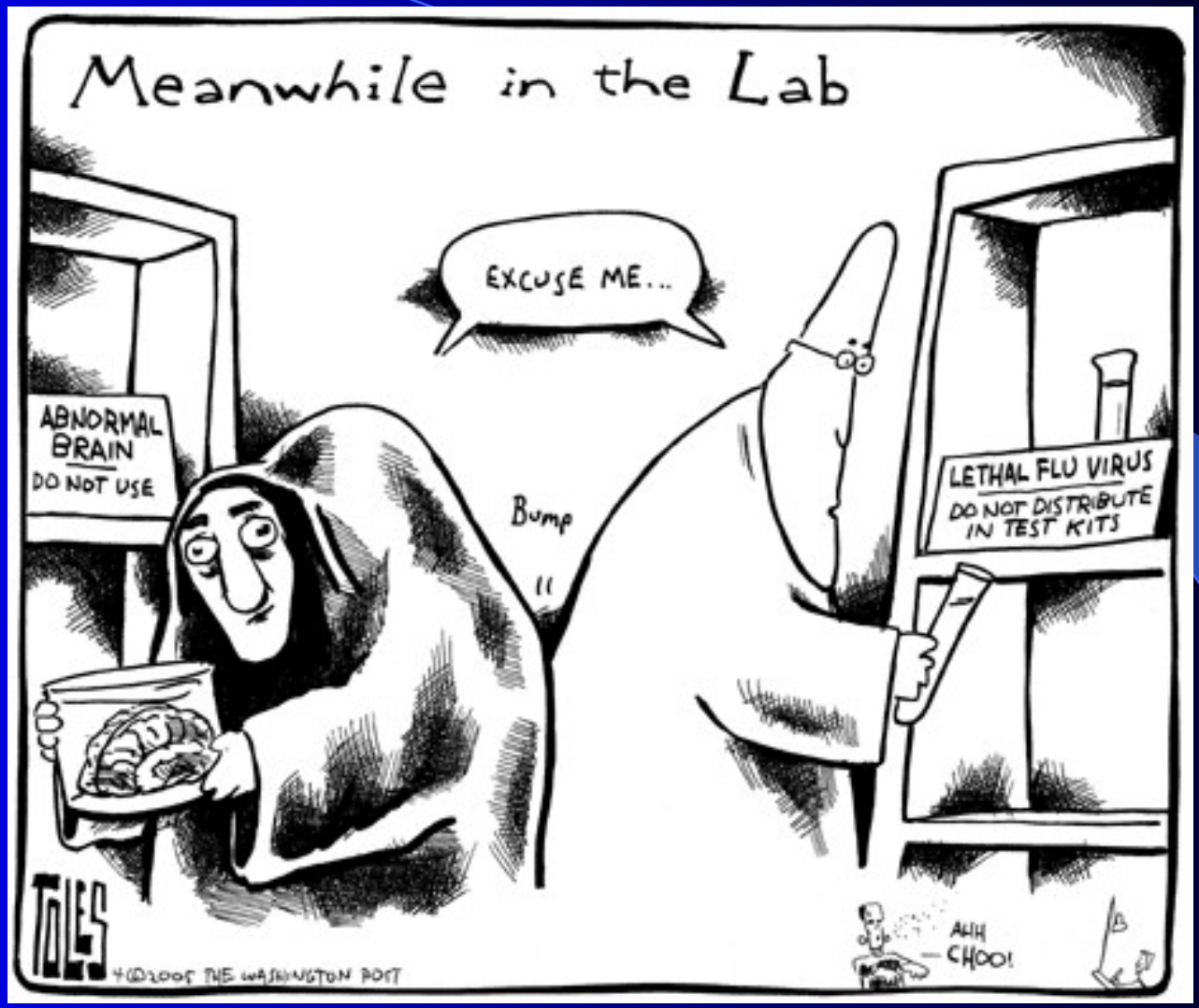
Valacyclovir 1 gm po bid x 7-10 days.

HSV – Recurrent Episodes

- HSV-2 significant more likely to recur
- Recurrent episodes less severe than initial
- Episodic Treatment:
  - Acyclovir 400 TID or 200 5X/Day or 800 BID X 5days
  - Famvir 125 BID X 5 days
  - Valacyclovir 500 BID X 3 days

HSV Suppression

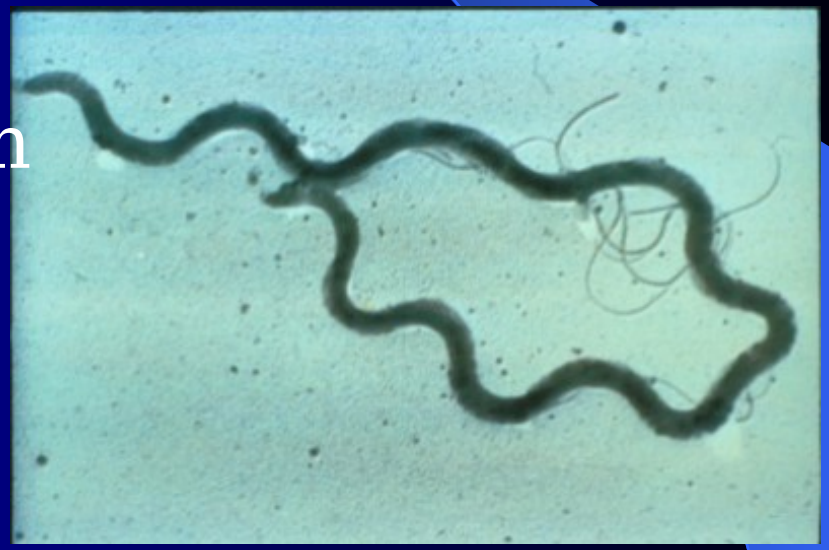
- Suppression in pregnancy not routinely suggested by ACOG or CDC
- Reduces frequency of clinical flares by 70-80%, significantly reduces shedding
  - Acyclovir 400 BID
  - Famvir 250 BID
  - Valacyclovir 500mg-1000mg QD
  - Start at 36 wks in pregnancy, or if recurrent episodes


Meanwhile in the Lab
EXCUSE ME...
ABNORMAL BRAIN
DO NOT USE
Bump
LETHAL FLU VIRUS
DO NOT DISTRIBUTE IN TEST KITS
TOLES
AHH CHOO!

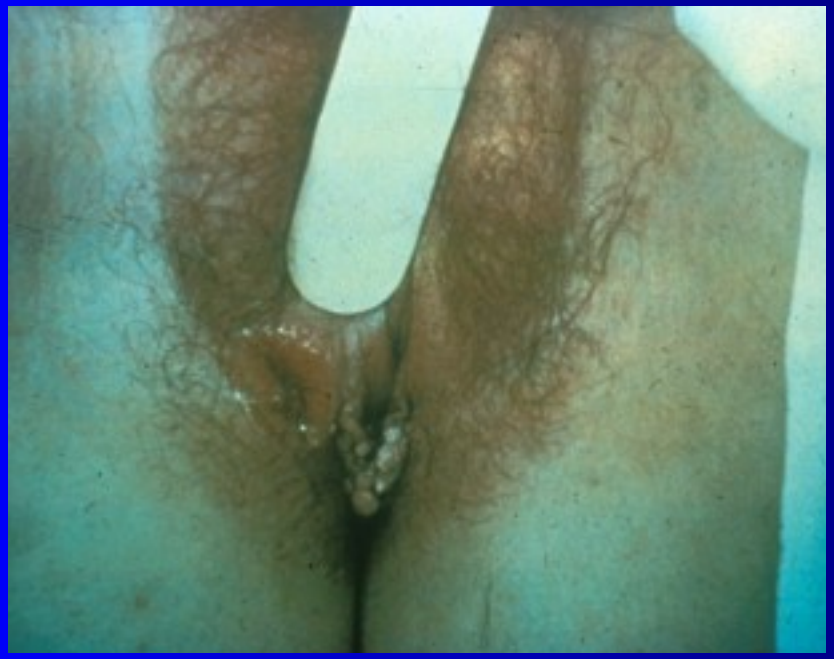
Syphilis - *Treponema pallidum*

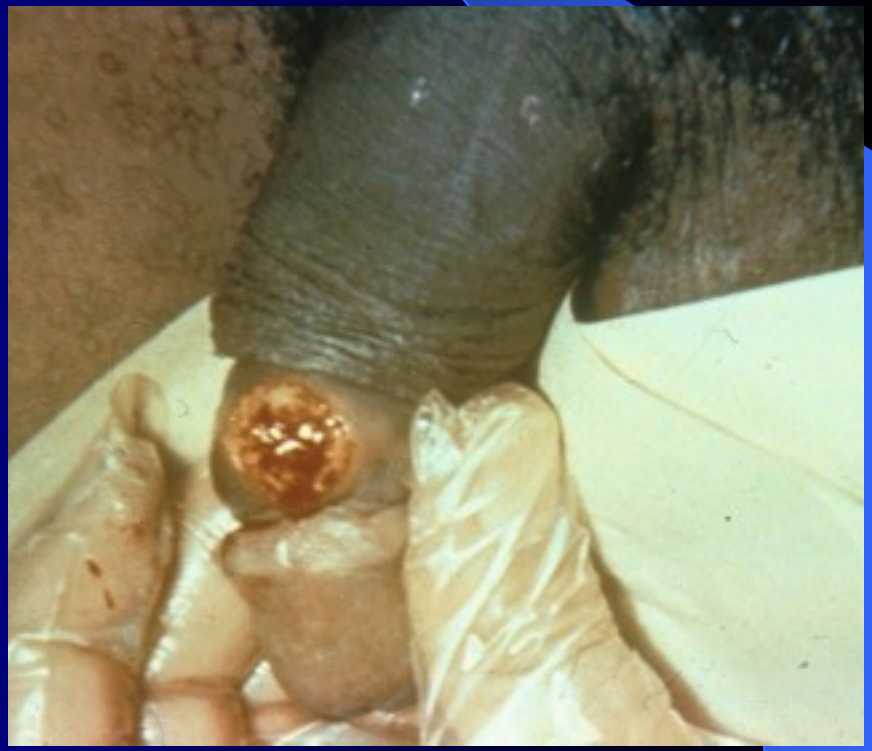
- Systemic disease caused by T. pallidum

- 4 Stages of infection
  - Primary
  - Secondary
  - Tertiary
  - Latent



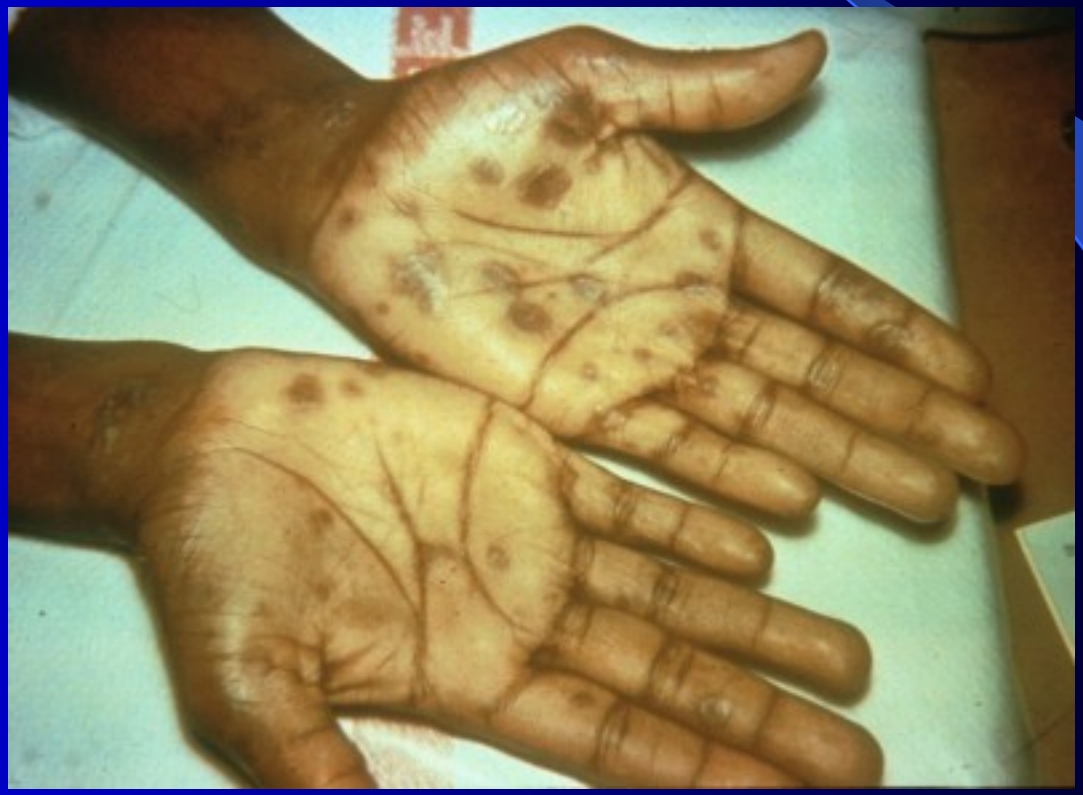
Primary syphilis-chancre





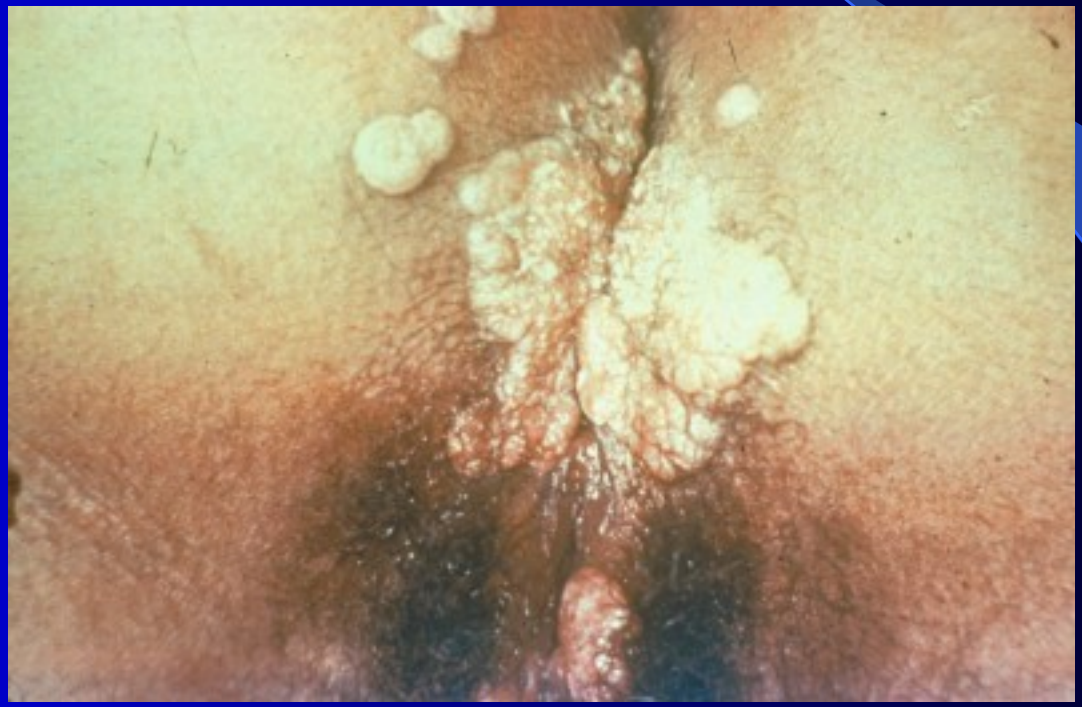
Hallmark:
PAINLESS!

Secondary syphilis



-skin rash; mucocutaneous lesions, regional lymphadenopathy

Secondary syphilis - condyloma lata



Syphilis Stages cont

- Tertiary- cardiac, neurologic, ophthalmic, auditory, gummatous lesions
- Latent- active infection diagnosed by serology without clinical signs of infection
  - Early Latent- infection acquired within preceding year
  - Late Latent- infection acquired >1 yr ago
  - Syphilis of Unknown Duration- self explanatory

Syphilis- Diagnostic Testing

- Treponemal Tests
  - Darkfield exam
  - Direct Fluorescent Antibody Tests
- Nontreponemal Tests
  - Venereal Disease Research Laboratory (VDRL)
  - RPR
- Diagnosis – mix of clinical/diagnostic

Treponemal Tests

- Fluorescent Treponemal Antibody Absorbed (FTA-ABS)
  - CSF FTA-ABS highly sensitive for neurosyphilis
    (a negative test excludes neurosyphilis)
- Microhemagglutination Assay for Antibody to T. pallidum (MHA-TP)
  - Most patients positive for remainder of their lives; poor marker for disease activity

Syphilis Treatment

- Three Drugs
  - Penicillin First line; Doxy/TCN 2nd line
  - Desensitize in pregnancy and use penicillin
- Treatment duration and course varies with syphilis stage
  - Unlikely to be on boards; see handout or CDC for details

Urethritis/Cervicitis Diseases

- Chlamydia
- GC
- MPC (mucopurulent cervicitis)
- NGU (nongonococcal urethritis)

Chlamydia

- Approximately 3 million cases / year!
- Asymptomatic infection common in women, less common in men
- Complications: infertility, PID, ectopic pregnancy

USPSTF-Chlamydia Screening

- A: Sexually active women <25, others with individual/population risk factors (new/multiple partners; prev GC; other STD, inconsistent condom use, sex worker, drug user)
- C: Screening asymptomatic low-risk women including in pregnancy
- B: Pregnant, <25 or increased risk
- I: Asymptomatic men

Chlamydia Diagnosis

- Culture- historical “gold standard”
  - Rarely recommended now
  - Limited medicolegal role
- Antigen detection with EIA acceptable
- DNA amplification testing
  - PCR, Ligase Chain Reaction – urine or cervical

Chlamydia Treatment

- Direct Observed Therapy Best!
  - Azithromycin 1gm po X 1
- Doxycycline 100mg BID X 7 days
- Alternatives:
  - Erythromycin 500 QID X 7D
  - EES 800 QID X 7D
  - Ofloxacin 300BID X 7D
  - Levofloxacin 500 QD X 7D
- ALL: Treat sexual partner; screen for other STDs
- counsel patients to abstain from sex until 7 days after patient and partner treated

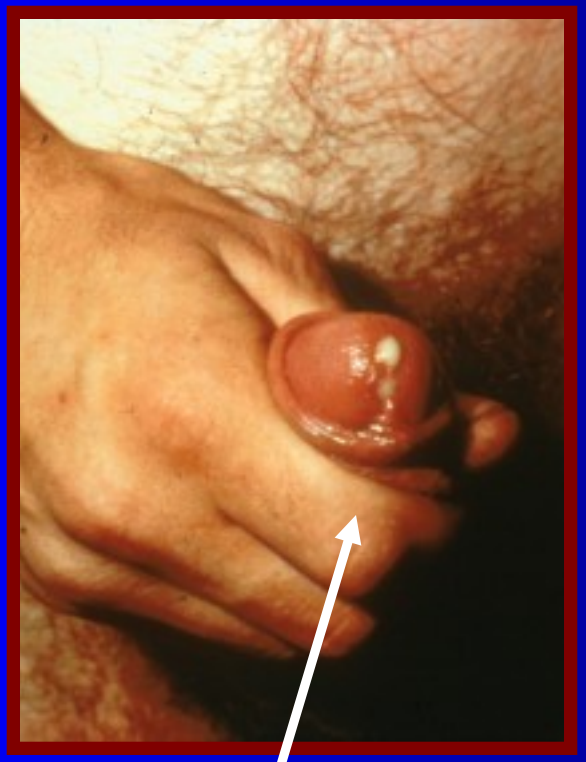
Chlamydia in Pregnancy

- Screen all women in 1st trimester, selective screening in 3rd trimester for high-risk
- Treat with
  - Azithryomycin 1gm X single dose
  - erythromycin 500 QID X 7D
  - amoxicillin 500 TID X 7d
  - Treat partners; abstain from sex until 7 weeks after treatment & partner treated
- Test of Cure in 3 weeks recommended!

Chlamydia Followup

- Test of Cure: recommended if doxy/azithro not used, and in pregnancy
- Rescreen: Test for REINFECTION
  - test 3-4 months later, definitely by 12 months after diagnosis
  - urine chlamydia testing ideal
- Test for other STD's

Gonorrhea



ick

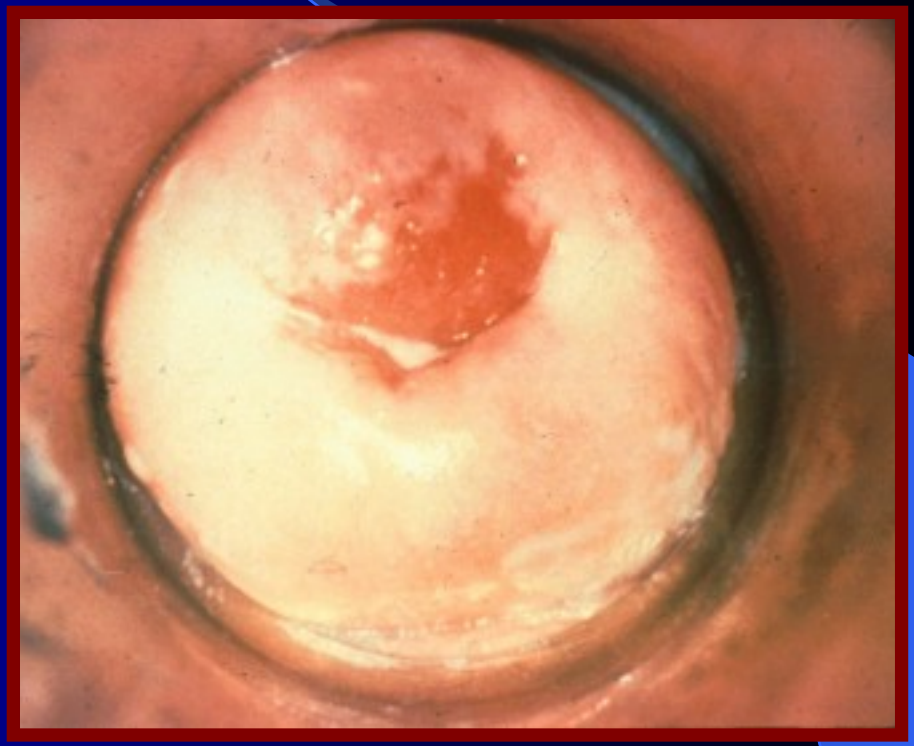
- 116.2 cases:100,000
- 2nd most common reportable disease
- Men typically symptomatic
- Women often asymptomatic
- Complications: epididymitis, PID, infertility, ectopic pregnancy

USPSTF Screening Rec's

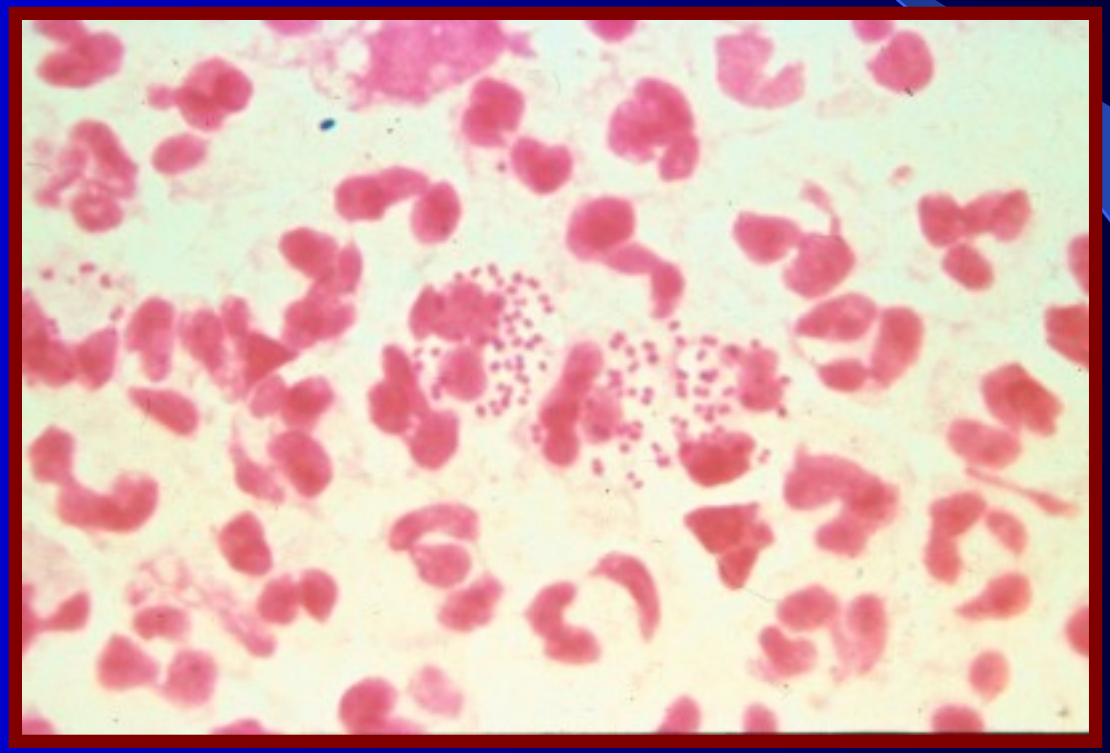
- B: Screen all sexually active women/pregnant women if they are young (<25) or have individual/population risk factors (new/multiple partners; prev GC; other STD, inconsistent condom use, sex worker, drug user)
- I: No recommendation for asymptomatic men
- D: Against screening for low risk individuals
- I: Low-risk pregnant women
- A: Eye Prophylaxis for neonates

Gonococcal cervicitis

- Diagnose with DNA probe or culture
  - CO_2-rich environment for culture
- **Cannot** diagnose in women with gram stain



Gonorrhea - gram stain of urethral discharge



Diagnosis by gram stain– MEN only

GC Treatment

- Ceftriaxone 125mg IM
- Cipro 500, oflox 400, levo 250 PO
  - NOT INDICATED for: infection acquired in California, Hawaii, Pacific Islands, Asia; England; any patient or partner of MSM (men who have sex with men); check local trends
- (cefixime 400mg PO)

Co-Treat for Chlamydia?

- Classically, diagnosis of GC = treatment for both GC and chlamydia
- Clinical practice still often follows this
- CDC recommends presumptive treatment unless concurrent highly accurate testing for chlamydia is negative

MPC, NGU

- MPC- mucopurulent cervicitis
- Dx: mucopurulent discharge from os or on endocervical swab.
- ? Value of increased PMN’s on endocervical gram stain
- Test for GC, Chlamydia
- Consider empiric Rx

- NGU- nongonococcal urethritis
- Dx: urethral smear w/ >5WBC/hpf; no GNID; clinical hx of discharge
- RX: 1gm azithro or doxy 100 BID X 7d
- Test for GC ,Chlamdyia

DOCTOR FUN

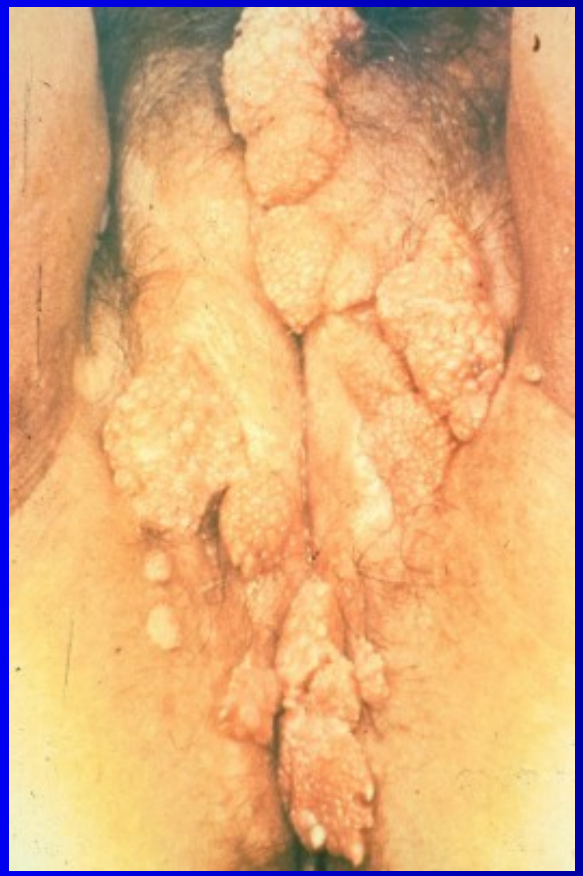
10 Nov 2000

"We've gotten a rather disturbing report back from product testing."

Human Papilloma Virus

- HPV: > 30 types in anogenital infection
- Visible warts: 6/11
- Cervical dysplasia: especially 16/18
- Diagnosis: clinical exam

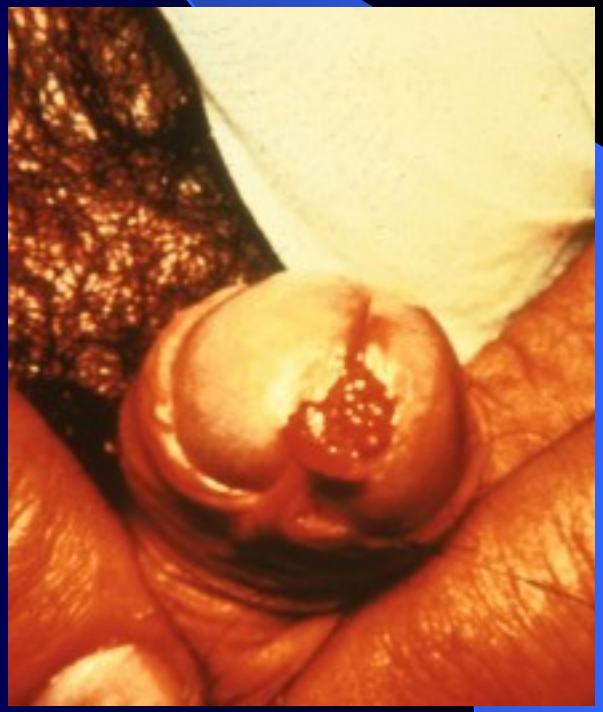
HPV Counselling



- Asymptomatic/Subclinical disease is common
- Once you've got it, you've got it!
- Counsel re: link to dysplasia; transmissibility; regular pap testing
- No role for HPV typing or routine colposcopy for visible warts

HPV- Treatment

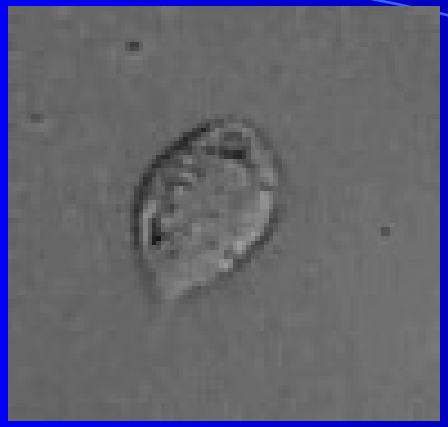
- Patient-applied
  - Podophilox 0.5% BID X 3 days, off 4 days, repeat up to 4 cycles.
  - Inimiquod 5% cream QHS, 3X/wk, 16wks max, wash off 6-10 hrs later
- Provider-applied
  - LN2 Q 1-2 wks
  - (Podophyllin resin 10-25%)
  - (TCA 80-90%, weekly)
  - (Laser therapy)
- Suggest referral for meatal warts, laryngeal warts



Diseases Characterized by Vaginal Discharge

- Vulvovaginal Candidiasis
- Bacterial Vaginosis
- Trichomonas vaginitis

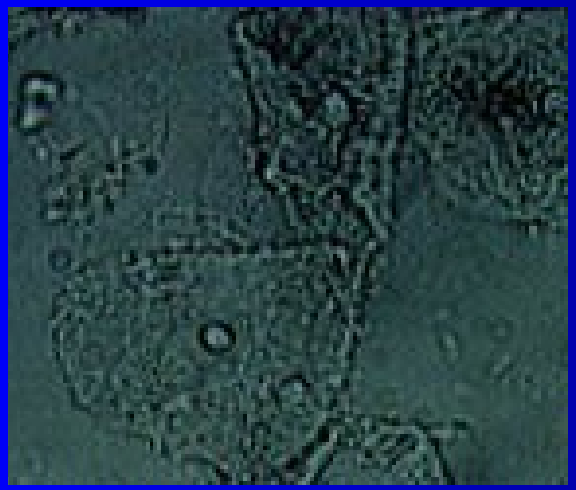
- Recommend targeted history, exam, KOH, wet prep, vaginal pH. Consider also GC/Chlamdyia testing, esp. if WBC’s seen



Trichomonas

- motile, pear-shaped, 10 µm by 7 µm, organisms with visible flagella. Wet prep only ~60-70% sensitive
- + whiff test; WBC's on wet prep; vaginal pH >4.5
- Trich on thin prep pap has >90% accuracy
- Diffuse, yellow-green, malodorous discharge
- Treat with metronidazole 2gm PO X 1
  - 500 BID X 7D alternative dosing
- Treat sexual partner

Bacterial Vaginosis



- Homogeneous vaginal discharge (color and amount may vary)
- Presence of clue cells (greater than 20%)
- Amine (fishy) odor when potassium hydroxide solution is added to vaginal secretions ("whiff test")
- Vaginal pH greater than 4.5
- Absence of the normal vaginal lactobacilli

- 3+ above criteria for diagnosis.
- Vagin*osis* – not Vagin*itis*

Bacterial Vaginosis Treatment

- Treatment Regimens:
  - Metronidazole 500 BID PO X 7D
  - Metronidazole 2gm PO X 1 dose
  - Metronidazole gel 0.75% IVA BID X 5D
  - Clindamycin 300mg PO BID X 7D
  - Clindamycin 2% cream 5GM IVA QHS X7D
- Recurrence is common
- Treatment of sexual partners not suggested

Vaccines for STDs

- Hepatitis A: MSM (men who have sex with men); illicit drug users, patients with chronic liver disease
- Hepatitis B: as per hepA, plus all teenagers; all treated for an STD; household contacts of chronic hep B patients
- Future Trends: HPV, HSV-2 vaccines

Questions?